

What is claimed is:

1 1. A digital broadcasting system comprising an authoring  
2 apparatus and a transmission apparatus that transmits a content  
3 transferred from the authoring apparatus,

4 wherein the authoring apparatus includes:

5 a generating means for generating event information,  
6 which defines an event message that should be transmitted  
7 immediately after an operator's instruction to transmit the  
8 event message is inputted, and

9 a processing means for processing a content, which  
10 should be transferred to the transmission apparatus, by adding  
11 the generated event information.

1 2. The digital broadcasting system of Claim 1,

2 wherein the generated event information includes the  
3 event message and tag information,

4 the tag information allowing the authoring apparatus  
5 to recognize that the event message should be (a) transferred  
6 to the transmission apparatus before the operator's instruction  
7 is inputted and (b) transmitted from the transmission apparatus  
8 immediately after the operator's instruction is inputted.

1 3. The digital broadcasting system of Claim 2,

2 wherein the authoring apparatus further includes:

3 an extracting means for extracting the event information

4 from the processed content by referring to the tag information;  
5 and

6 a transferring means for transferring the extracted  
7 event information to the transmission apparatus, and  
8 the transmission apparatus includes:

9 a storing means for storing the event message included  
10 in the event information transferred from the authoring  
11 apparatus;

12 an issuing means for issuing the event message stored  
13 in the storing means by receiving the operator's instruction;  
14 and

15 a multiplexing means for multiplexing and transmitting  
16 the issued event message with a content that has been transferred  
17 from the authoring apparatus.

1 4. The digital broadcasting system of Claim 3,  
2 wherein the authoring apparatus further includes an  
3 obtaining means for obtaining a content, to which event  
4 information has been added, from the outside, and  
5 the extracting means extracts the event information  
6 from the obtained content.

1 5. The digital broadcasting system of Claim 4,  
2 wherein the obtaining means obtains a content, to which  
3 event information has been added, from a transportable recording  
4 medium.

1 6. The digital broadcasting system of Claim 4,  
2 wherein the obtaining means obtains a content, to which  
3 event information has been added, via a network.

1 7. The digital broadcasting system of Claim 1,  
2 wherein the generated event information includes the  
3 event message and tag information,  
4 the tag information allowing the authoring apparatus  
5 to recognize that the event message should be issued to the  
6 transmission apparatus and transmitted therefrom immediately  
7 after the operator's instruction is inputted.

1 8. The digital broadcasting system of Claim 7,  
2 wherein the authoring apparatus further includes:  
3 an extracting means for extracting the event information  
4 from the processed content by referring to the tag information;  
5 a storing means for storing the event message included  
6 in the extracted event information; and  
7 an issuing means for issuing the event message stored  
8 in the storing means to the transmission apparatus by receiving  
9 the operator's instruction, and  
10 the transmission apparatus includes:  
11 a multiplexing means for multiplexing and transmitting  
12 the issued event message with a content that has been transferred  
13 from the authoring apparatus.

1 9. The digital broadcasting system of Claim 8,  
2 wherein the authoring apparatus further includes an  
3 obtaining means for obtaining a content, to which event  
4 information has been added, from the outside, and  
5 the extracting means extracts the event information  
6 from the obtained content.

1 10. The digital broadcasting system of Claim 9,  
2 wherein the obtaining means obtains a content, to which  
3 event information has been added, from a transportable recording  
4 medium.

1 11. The digital broadcasting system of Claim 9,  
2 wherein the obtaining means obtains a content, to which  
3 event information has been added, via a network.

1 12. An authoring apparatus comprising:  
2 a generating means for generating event information,  
3 which defines an event message that should be transmitted  
4 immediately after an operator's instruction to transmit the  
5 event message is inputted, and  
6 a processing means for processing a content, which  
7 should be transferred to a transmission apparatus, by adding  
8 the generated event information.

1 13. The authoring apparatus of Claim 12,  
2 wherein the generated event information includes the  
3 event message and tag information,  
4 the tag information allowing the authoring apparatus  
5 to recognize that the event message should be (a) transferred  
6 to the transmission apparatus before the operator's instruction  
7 is inputted and (b) transmitted from the transmission apparatus  
8 immediately after the operator's instruction is inputted.

1 14. The authoring apparatus of Claim 13 further comprising:  
2 an extracting means for extracting the event information  
3 from the processed content by referring to the tag information;  
4 and  
5 a transferring means for transferring the extracted  
6 event information to the transmission apparatus.

1 15. The authoring apparatus of Claim 14 further comprising:  
2 an obtaining means for obtaining a content, to which  
3 event information has been added, from the outside,  
4 wherein the extracting means extracts the event  
5 information from the obtained content.

1 16. The authoring apparatus of Claim 15,  
2 wherein the obtaining means obtains a content, to which  
3 event information has been added, from a transportable recording  
4 medium.

1 17. The authoring apparatus of Claim 15,  
2 wherein the obtaining means obtains a content, to which  
3 event information has been added, via a network.

1 18. The authoring apparatus of Claim 12,  
2 wherein the generated event information includes the  
3 event message and tag information,  
4 the tag information allowing the authoring apparatus  
5 to recognize that the event message should be issued to the  
6 transmission apparatus and transmitted therefrom immediately  
7 after the operator's instruction is inputted.

1 19. The authoring apparatus of Claim 18 further comprising:  
2 an extracting means for extracting the event information  
3 from the processed content by referring to the tag information;  
4 a storing means for storing the event message included  
5 in the extracted event information; and  
6 an issuing means for issuing the event message stored  
7 in the storing means to the transmission apparatus by receiving  
8 the operator's instruction.

1 20. The authoring apparatus of claim 19 further comprising:  
2 an obtaining means for obtaining a content, to which  
3 event information has been added, from the outside,  
4 wherein the extracting means extracts the event

5 information from the obtained content.

1 21. The authoring apparatus of Claim 20,  
2 wherein the obtaining means obtains a content, to which  
3 event information has been added, from a transportable recording  
4 medium.

1 22. The authoring apparatus of Claim 20,  
2 wherein the obtaining means obtains a content, to which  
3 event information has been added, via a network.

1 23. A transmission apparatus that transmits a content  
2 transferred from an authoring apparatus, comprising:  
3 a storing means for storing an event message included  
4 in event information transferred from an authoring apparatus;  
5 an issuing means for issuing the event message stored  
6 in the storing means by receiving an operator's instruction  
7 to transmit the event message; and  
8 a multiplexing means for multiplexing and transmitting  
9 the issued event message with a content that has been transferred  
10 from the authoring apparatus.

1 24. An event message transmission method for use in a digital  
2 broadcasting system comprising an authoring apparatus and a  
3 transmission apparatus that transmits a content transferred  
4 from the authoring apparatus,

5                   the event message transmission method comprising:  
6                   a generating step for generating event information,  
7                   which defines an event message that should be transmitted  
8                   immediately after an operator's instruction to transmit the  
9                   event message is inputted, and  
10                  a processing step for processing a content, which should  
11                be transferred to the transmission apparatus, by adding the  
12                generated event information.

1   25. The event message transmission method of Claim 24,  
2                wherein the generated event information includes the  
3                event message and tag information,  
4                the tag information allowing the authoring apparatus  
5                to recognize that the event message should be (a) transferred  
6                to the transmission apparatus before the operator's instruction  
7                is inputted and (b) transmitted from the transmission apparatus  
8                immediately after the operator's instruction is inputted.

1   26. The event message transmission method of Claim 25 further  
2                comprising:  
3                an extracting step for extracting the event information  
4                from the processed content by referring to the tag information;  
5                a transferring step for transferring the extracted  
6                event information to the transmission apparatus,  
7                a storing step for storing, in a storing unit of the  
8                transmission apparatus, the event message included in the event

9 information transferred from the authoring apparatus;  
10 an issuing step for issuing the event message stored  
11 in the storing unit by receiving the operator's instruction;  
12 and  
13 a multiplexing step for multiplexing and transmitting  
14 the issued event message with a content that has been transferred  
15 from the authoring apparatus.

1 27. The event message transmission method of Claim 26 further  
2 comprising:

3 an obtaining step for obtaining a content, to which  
4 event information has been added, from the outside,  
5 wherein the extracting step extracts the event  
6 information from the obtained content.

1 28. The event message transmission method of Claim 27,  
2 wherein the obtaining step obtains a content, to which  
3 event information has been added, from a transportable recording  
4 medium.

1 29. The event message transmission method of Claim 27,  
2 wherein the obtaining step obtains a content, to which  
3 event information has been added, via a network.

1 30. The event message transmission method of Claim 24,  
2 wherein the generated event information includes the

3 event message and tag information,  
4 the tag information allowing the authoring apparatus  
5 to recognize that the event message should be issued to the  
6 transmission apparatus and transmitted therefrom immediately  
7 after the operator's instruction is inputted.

1 31. The event message transmission method of Claim 30 further  
2 comprising:

3 an extracting step for extracting the event information  
4 from the processed content by referring to the tag information;  
5 a storing step for storing, in a storing unit of the  
6 authoring apparatus, the event message included in the extracted  
7 event information;

8 an issuing step for issuing the event message stored  
9 in the storing unit to the transmission apparatus by receiving  
10 the operator's instruction; and

11 a multiplexing step for multiplexing and transmitting  
12 the issued event message with a content that has been transferred  
13 from the authoring apparatus.

1 32. The event message transmission method of Claim 31 further  
2 comprising:

3 an obtaining step for obtaining a content, to which  
4 event information has been added, from the outside,  
5 wherein the extracting step extracts the event  
6 information from the obtained content.

1 33. The event message transmission method of Claim 32,  
2 wherein the obtaining step obtains a content, to which  
3 event information has been added, from a transportable recording  
4 medium.

1 34. The event message transmission method of Claim 32,  
2 wherein the obtaining step obtains a content, to which  
3 event information has been added, via a network.

1 35. An event message generating method used by an authoring  
2 apparatus, comprising:

3 a generating step for generating event information,  
4 which defines an event message that should be transmitted  
5 immediately after an operator's instruction to transmit the  
6 event message is inputted, and

7 a processing step for processing a content, which should  
8 be transferred to a transmission apparatus, by adding the  
9 generated event information.

1 36. The event message generating method of Claim 35,  
2 wherein the generated event information includes the  
3 event message and tag information,

4 the tag information allowing the authoring apparatus  
5 to recognize that the event message should be (a) transferred  
6 to the transmission apparatus before the operator's instruction

7 is inputted and (b) transmitted from the transmission apparatus  
8 immediately after the operator's instruction is inputted.

1 37. The event message generating method of Claim 36 further  
2 comprising:

3 an extracting step for extracting the event information  
4 from the processed content by referring to the tag information;  
5 and

6 a transferring step for transferring the extracted  
7 event information to the transmission apparatus.

1 38. The event message generating method of Claim 37 further  
2 comprising:

3 an obtaining step for obtaining a content, to which  
4 event information has been added, from the outside,

5 wherein the extracting step extracts the event  
6 information from the obtained content.

1 39. The event message generating method of Claim 38,  
2 wherein the obtaining step obtains a content, to which  
3 event information has been added, from a transportable recording  
4 medium.

1 40. The event message generating method of Claim 38,  
2 wherein the obtaining step obtains a content, to which  
3 event information has been added, via a network.

1 41. The event message generating method of Claim 35,  
2 wherein the generated event information includes the  
3 event message and tag information,  
4 the tag information allowing the authoring apparatus  
5 to recognize that the event message should be issued to the  
6 transmission apparatus and transmitted therefrom immediately  
7 after the operator's instruction is inputted.

1 42. The event message generating method of Claim 41 further  
2 comprising:  
3 an extracting step for extracting the event information  
4 from the processed content by referring to the tag information;  
5 a storing step for storing, in a storing unit of the  
6 authoring apparatus, the event message included in the extracted  
7 event information; and  
8 an issuing step for issuing the event message stored  
9 in the storing unit to the transmission apparatus by receiving  
10 the operator's instruction.

1 43. The event message generating method of Claim 42 further  
2 comprising:  
3 an obtaining step for obtaining a content, to which  
4 event information has been added, from the outside,  
5 wherein the extracting step extracts the event  
6 information from the obtained content.

1 44. The event message generating method of Claim 43,  
2 wherein the obtaining step obtains a content, to which  
3 event information has been added, from a transportable recording  
4 medium.

1 45. The event message generating method of Claim 43,  
2 wherein the obtaining step obtains a content, to which  
3 event information has been added, via a network.

1 46. An event message transmission method used by a transmission  
2 apparatus that transmits a content transferred from an authoring  
3 apparatus, comprising:

4 a storing step for storing, in a storing unit of the  
5 transmission apparatus, an event message included in event  
6 information transferred from the authoring apparatus;

7 an issuing step for issuing the event message stored  
8 in the storing unit by receiving an operator's instruction  
9 to transmit the event message; and

10 a multiplexing step for multiplexing and transmitting  
11 the issued event message with a content that has been transferred  
12 from the authoring apparatus.

1 47. A computer-readable recording medium that records event  
2 information, the event information defining an event message  
3 that is generated at an authoring apparatus and is transmitted

4 by a transmission apparatus to each receiving apparatus,  
5 wherein the event information includes the event message  
6 and tag information,

7 the tag information allowing the authoring apparatus  
8 to recognize that the event message should be (a) transferred  
9 to the transmission apparatus before an operator's instruction  
10 to transmit the event message is inputted and (b) transmitted  
11 from the transmission apparatus immediately after the  
12 operator's instruction is inputted.

1 48. The computer-readable recording medium of Claim 47 further  
2 records a program that describes processing, which the receiving  
3 apparatus should perform when receiving the event message.

1 49. A computer-readable recording medium that records event  
2 information, the event information defining an event message  
3 that is generated at an authoring apparatus and is transmitted  
4 by a transmission apparatus to each receiving apparatus,  
5 wherein the event information includes the event message  
6 and tag information,  
7 the tag information allowing the authoring apparatus  
8 to recognize that the event message should be issued to the  
9 transmission apparatus and transmitted therefrom immediately  
10 after an operator's instruction to transmit the event message  
11 is inputted.

1    50. The computer-readable recording medium of Claim 49 further  
2    records a program that describes processing, which the receiving  
3    apparatus should perform when receiving the event message.